



an Open Access Journal by MDPI

## Nonlinear Dynamics and Applications to Structural Engineering

Guest Editor:

**Prof. Dr. Enrico Babilio**

Department of Structures for  
Engineering and Architecture,  
University of Naples Federico II,  
Naples, Italy

Deadline for manuscript  
submissions:

**closed (20 November 2022)**

### Message from the Guest Editor

This Special Issue aims to collect original research articles and comprehensive reviews that consider any analytical, computational, or experimental aspect of nonlinear dynamics, paying special attention to engineering structures. Topics include but are not limited to continuous and discrete systems; composite, smart, lattice, or tensegrity structures; control, bifurcation, and synchronization phenomena; nonlinear responses of periodically or stochastically loaded structures; parametric excitation; periodic, quasi-periodic, and chaotic motion; fractional and nonlinear damping; dynamical integrity; analytical and numerical methods for nonlinear analysis; and geometrically exact beam models. Papers focused on numerical or experimental applications in any field of engineering, ranging from macro- to nanoscale, will also be highly appreciated.

- nonlinear dynamic response
- structural dynamics
- chaotic dynamics
- engineering systems and structures
- geometrically exact beam models
- bifurcation and stability
- dynamical integrity



[mdpi.com/si/57364](https://mdpi.com/si/57364)



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

## Message from the Editor-in-Chief

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

**Journal Rank:** JCR - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (*Condensed Matter Physics*)

## Contact Us

---

Materials Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/materials](http://mdpi.com/journal/materials)  
[materials@mdpi.com](mailto:materials@mdpi.com)  
[X@Materials\\_Mdpi](https://twitter.com/Materials_Mdpi)